



REMARKS

Re-examination and reconsideration of the subject matter identified in caption, pursuant to and consistent with 37 C.F.R. §1.111, and in light of the remarks which follow, are respectfully requested.

Initially, Applicants wish to acknowledge the personal interview conducted with Examiner Sines on September 8, 2006. The Examiner's courtesy and helpful suggestions are acknowledged with appreciation.

Claims 3-8, 10-14, 16-18 and 20-24, 26-29 and 31 remain pending in this application.

Claims 3-8, 10-14, 16-18, 20-24 and 26-29 and 31 were rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,765,397 (Honda et al) in view of U.S. Patent No. 4,042,332 (Saitoh et al) and U.S. Patent No. 5,073,753 (Collings et al) for the reasons given in pages 2-6 of the Office Action. Reconsideration and withdrawal of this rejection are respectfully requested for at least the reasons which follow.

Honda et al '397 discloses an air liquification process in which compressed air is liquified, rectified and separated to provide, *inter alia*, liquid and gaseous oxygen and liquid nitrogen. An objective of this document is to prevent the accumulation of high concentrations of hydrocarbons in liquid oxygen in a main condenser-evaporator which could result in an explosive mixture (see column 2, lines 24-26 and 53-54, and column 1, lines 51-55, of Honda et al '397). This objective is attained by contacting oxygen gas with liquid oxygen to remove hydrocarbons before the gas is forwarded to the condenser-evaporator (see column 3, lines 17-19 and 56-58). Thus, substantially all hydrocarbons are removed before oxygen is processed in the condenser-evaporator; note column 7, lines 56-58: "... the hydrocarbons are prevented from accumulating in the main condenser-evaporator." Note also the data in Table 1 in column 11 of Honda et al '397 which shows that the cleansing

technique leads to negligible amounts of non-methane hydrocarbons in the main condenser-evaporator.

Saitoh et al '332 is directed to a method of detecting non-methane hydrocarbon levels in air which contains about 20-21% oxygen as opposed to the oxygen levels in the liquid oxygen baths in Honda et al '397. The Office Action alleges that it would have been obvious to one of ordinary skill in the art to determine hydrocarbon levels in the liquid oxygen bath of Honda et al '397 using the measuring technique of Saitoh et al '332. Respectfully, Applicant disagrees.

As described above, the cleansing process of Honda et al '397 removes virtually all hydrocarbons before oxygen is processed in the condenser-evaporator such that the liquid oxygen baths are free of hydrocarbons. In that case, there would have been no incentive or motivation to modify the process of Honda et al '397 to measure hydrocarbon levels in the oxygen bath since the invention of Honda et al '397 is intended to ensure that the oxygen is virtually hydrocarbon-free when processed in the compressor-evaporator.

Collings et al '753 is directed to a process of measuring the levels of unburnt hydrocarbon in the exhaust gases of internal combustion engines using flame ionization detectors. This document is not concerned with detecting hydrocarbon levels in highly concentrated oxygen baths.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The motivation to modify the relied on prior art must flow

from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. *In re Napier*, 55 F.2d 610, 613; 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995). Obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the modification. *In re Geiger*, 815 F.2d 686, 688; U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987).

Applicant respectfully submits that the cited references are in divergent art areas and represent three independent disclosures with no teachings that would suggest combining their respective disclosures. There is no motivation to combine Honda et al '397 with Saitoh et al '333 for reasons discussed above. The disclosure in Collings et al '753 may establish the flame ionization detectors were known in the art but the document contains no suggestion to provide a flame ionization detector in the process and apparatus of Honda et al '397.

As stated in *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1316-17 (Fed. Cir. 2000):

[m]ost if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant [citations omitted].

In view of the above, the §103 rejection over Honda et al '397 in view of Saitoh et al '332 and Collings et al '753 should be reconsidered and withdrawn. Such action is earnestly solicited.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any

questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at his earliest convenience.

Respectfully submitted,

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